# **Course Objectives:**

Develop a fundamental understanding of carbon-carbon single and double bond formation.

Development of highly stereoselective reactions and their applications in complex syntheses. These reactions include stereoselective alkylation of carbonyl compounds, stereoselective aldol condensations, stereoselective oxidations, epoxidations and reductions.

Discussion of newer methods for the stereoselective formation of carbon-carbon double bonds, and the modern application of the Diels Alder reaction, particularly its use in the control of stereochemistry in the synthesis of natural products.

# Carboxylic Acids and Derivatives.

\_\_\_\_\_2 weeks

### Formation of carbon-carbon single bonds.

----2 weeks.

### Formation of carbon-carbon double bonds and Rearrangements.

----3 weeks.

### **Student learner outcomes:**

At the successful completion of this course, you will demonstrate understanding of the key elements of molecular orbital interpretation of various types of concerted pericyclic reactions by successful completion of an assessment exam.

### Method(s) of evaluation and grading procedures:

Evaluation of the course objectives will be assessed by the evaluation of two major examinations (hour exams) and a comprehensive final examination.

Total	400 pts
Examination 3, Comprehensive (Final)	200pts
Examination 2	100pts
Examination 1	100pts

Due to time constraints no make

exams are granted only for excused (official university) absences. Please note that attendance policies may vary by college. No late assignments will be accepted.

### **Other Forms of Academic Misconduct:**

1) Failure to follow published departmental guidelines, professor's syllabi, and other posted academic policies in place for the orderly and efficient instruction of classes, including laboratories, and use of academic resources or equipment.

2) Unauthorized possession of examinations, reserved library materials, laboratory materials or other course related materials.

3) Failure to follow the instructor or proctor's test-taking instructions, including but not limited to not setting aside notes, books or study guides while the test is in progress, failing to sit in designated locations and/or leaving the classroom/ test site without permission during a test.

4) Prevention of the convening, continuation or orderly conduct of any class, lab or class activity. Engaging in conduct that interferes with or disrupts university teaching, research or class activities such as making loud and distracting noises, repeatedly answering cell phones/text messaging or allowing pagers to beep, exhibiting erratic or irrational behavior, persisting in speaking without being recognized, repeatedly leaving and entering the classroom or test site without authorization, and making physical threats or verbal insults to the faculty member, or other students and staff.

5) Falsification of student transcript or other academic records; or unauthorized access to academic computer records.

6) Nondisclosure or misrepresentation in filling out applications or other university records.

7) Any action which may be deemed as unprofessional or inappropriate in the professional community of the discipline being studied.

**Non-academic misconduct** (see page 23, section 100 of the student handbook): The university respects the rights of instructors to teach and of students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with these rights will not be tolerated; examples include

- 1) interfering with the instructor's ability to conduct the class,
- 2) causing inability of other students to profit from the instructional program, or
- 3) any interference with the rights of others.

An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under non-academic procedures.

Ongoing behaviors or single behaviors considered distracting (e.g., coming late to class, performing a repetitive act that is annoying, sleeping or reading a newspaper in class, etc.) will be addressed by the faculty member initially either generally or individually. Cases in which such annoying behavior becomes excessive and the student refuses to respond to the faculty member's efforts can be referred to the Dean of Students. In the case of serious disruptive behavior in a classroom the instructor may first request compliance from the student and if it is not received, an instructor has the authority to ask the student to leave the classroom. If the student fails to leave after being directed to do so, assistance may be obtained from other university personnel, including University

Police Department. An individual engaging in such disruptive behavior is subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under non-academic procedures to determine if the student should be allowed to return to the classroom.

**Harassment /Discrimination** (See page 23, section 200 of Student Handbook): Texas A&M University-Kingsville will investigate all complaints that indicate sexual harassment, harassment, or discrimination may have occurred by the facts given by the complainant. Sexual harassment of anyone at Texas A&M University-Kingsville is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action. A person who believes he/she has been the victim of sexual harassment, harassment, or discrimination may pursue either the informal or the formal complaint resolution procedure. A complaint may be initially made to the complainant's immediate supervisor, a department head, any supervisory employee, the Dean of Students (593-3606), or the Office of Compliance (593-4758). Regardless of who the complaint is filed with, the Compliance Office will be notified of the complaint so it can be investigated.

#### **Six-drop policy:**

The following provision (new in Fall 2007) does not apply to students with Texas public